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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,073	06/30/2003	Ing-Jun Chen	P56902	7853

7590

07/07/2004

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EXAMINER

BERNHARDT, EMILY B

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,073

Applicant(s)

CHEN, ING-JUN

Examiner

Emily Bernhardt

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/21/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. In the formula in claim 1 for the "X" definition note the missing bond at the right end of the divalent chain.
2. In the R₂ definition mention of ortho, meta and para positions for just halo groups renders remaining choices unclear as to where they can be located on the benzene ring given that R₂ is depicted as floating.
3. Composition claims 4-8 are substantial duplicates of one another. Note that different intended uses in such claims are given no material weight. See *In re Tuominen* 213 USPQ 89 and MPEP 2111.02.
4. Claim 9 and claims dependent thereon is unclear for more than one reason. The first reactant recited, namely 4-epoxyisoeugenol, is not precisely named since the epoxy ring can be alpha or beta to the phenyl ring and only one of these would be able to introduce the piperazine at the terminal end of the chain. Second, piperazine *per se* as the 2nd reactant makes no sense since piperazine in claim 1 is R₂-phenylsubstituted. Thus additional step(s) are needed to introduce this portion of the compound to the piperazine ring. Finally **not any of the compounds of claim 1** can be made by the limited steps shown since isoeugenol epoxide consists of a 3

carbon chain yet X is far broader in claim 9 and includes R3 as H as well as OH.

The epoxide at best would make X chains where $n=0$ and $R3=OH$. This discrepancy aside isoeugenol moiety contains a hydroxy at the 4-position while applicants' compounds are alkoxy or alkenyloxy at this location.

5. "Preparing step" in claim 10 is grammatically awkward. It would read better to say: "The method of claim 9 wherein 4-epoxy.... is prepared..... or similar language.

Claims 9-10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims make compounds outside the scope of claim 1 as discussed in the above 112 rejection.

Claims 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The process of claim 9 is not enabled for making instant

compounds. As discussed in the above 112 rejection, the reactants recited do not make instant compounds where OR1 can be alkoxy, alkenyloxy, etc. Additionally, the examples in the specification which are made by the instant process do **not** correspond to any compound within claim 1. See examples 1-3 which consistently show a **oxy group** as part of the "X" link. There is however no "oxy" present in the claims scope. Also "propylenyl" in the title name is not proper nomenclature- propyl or propenyl are art-recognized terms and again its not clear how either are produced employing isoeugenol which has a hydroxy at the 4-position and a methoxy at the 3-position.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Boissier (GB'493). The GB publication describes several compounds within the instant scope for pharmaceutical uses. See examples 6, 10(B), 11(B) on p.5-7, respectively. Also see the same compounds in claims 7, 11, 12 and 15. Note that

preparation in example 6 which is ultimately isolated as the HCl salt inherently makes the free compound first analogous to preparation in example 5.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Gupta . Gupta describes a compound within the instant scope which was prepared by the process described on p.242. See compound 15 in Table 1 which was isolated as its HCl salt. The process employed to make 15 includes preparaton of the free amine as discussed in the "Chemistry" section on p.242 and thus the free form is inherently produced by Gupta. The HCL salt is described as having been screened for some undisclosed pharmaceutical activity.

Applicants' IDS filed 8/21/03 has been considered except for the Dunn and Girard references which are not present in the file which is currently in electronic form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Bernhardt whose telephone number is (571) 272-0664.

If attempts to reach the examiner by phone are unsuccessful, the supervisor for AU 1624, Dr. Mukund Shah, can be reached at (571)272-0674.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



EMILY BERNHARDT

PRIMARY EXAMINER

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Art Unit: 1624

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